

**MINUTES
of the
FOURTH MEETING
of the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE**

**November 12, 2013
Room 311, State Capitol
Santa Fe**

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The fourth meeting of the Radioactive and Hazardous Materials Committee (RHMC) was called to order by Senator Peter Wirth, chair, on Tuesday, November 12, 2013, in Room 311 of the State Capitol.

Present

Sen. Peter Wirth, Chair
Rep. Eliseo Lee Alcon, Vice Chair
Rep. Thomas A. Anderson
Rep. Stephanie Garcia Richard
Sen. Gay G. Kernan
Sen. Carroll H. Leavell
Sen. Richard C. Martinez
Sen. John Pinto
Rep. Jim R. Trujillo

Advisory Members

Sen. Ron Griggs
Sen. Daniel A. Ivey-Soto
Sen. Michael Padilla
Sen. Nancy Rodriguez
Rep. Nick L. Salazar

Absent

Rep. Cathrynn N. Brown
Sen. Carlos R. Cisneros
Rep. David M. Gallegos

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Rep. Donald E. Bratton
Sen. William F. Burt
Rep. Brian F. Egolf, Jr.
Rep. William "Bill" J. Gray
Sen. Stuart Ingle
Rep. Emily Kane
Sen. William H. Payne
Sen. Clemente Sanchez
Sen. Lisa A. Torracco

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Staff

Gordon Meeks, Legislative Council Service (LCS)
Renée Gregorio, LCS

Guests

The guest list is in the meeting file.

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Handouts

Handouts and other written testimony are in the meeting file.

Tuesday, November 12

The minutes from the October RHMC meeting were adopted unanimously.

Product Stewardship

Jill Turner, pollution prevention program manager at New Mexico's Department of Environment (NMED), reviewed the efforts and conclusions made by the task force that was formed as a result of House Memorial (HM) 56 (2013) asking the department to study the efficacy of establishing a product stewardship program in New Mexico. Ms. Turner said that product stewardship is becoming more common in the U.S. as a product-centered approach to environmental protection that calls on all participants in a product's life cycle to share responsibility for reducing the environmental impact of that product. She added that extended producer responsibility (EPR) is a type of product stewardship that shifts financial and management responsibility away from the public sector and provides incentives to producers to incorporate environmental considerations into the design of products. Ms. Turner then identified product categories considered in stewardship programs in other states, such as electronics, mattresses, carpets and products containing mercury. She stated that legislation for product stewardship programs has helped to increase both the recycling of such products and their end-of-life management. She said that EPR programs in other states have had a neutral or positive effect on local businesses.

A task force met during the fall of this year (see Appendix A of the NMED's report for its members) and researched product stewardship in the U.S., then made recommendations for what products would most benefit from product stewardship, Ms. Turner said. The task force created findings for each of HM 56's tasks, which included recommendations for the following: 1) establishing stewardship programs; 2) changes to existing statute to facilitate stewardship goals; 3) identifying any national stewardship programs that could voluntarily serve New Mexico; and 4) identifying a product or category for a stewardship program. Ms. Turner reviewed some of the task force's actions and findings. For the first task, she indicated the following: there are currently no stewardship programs in existence in New Mexico; the task force researched and corresponded with other organizations; an advisory group was formed to facilitate the design and implementation of a product stewardship program; benefits and challenges of product stewardship programs were identified; and there is a need to coordinate with industry associations to determine the use of and waste generation rates of products. As related to the second task of HM 56, Ms. Turner indicated that there is nothing in state statute that prohibits stewardship and that the task force determined that such a program would actually support the Solid Waste Act as written. She said that language stating that product stewardship is a waste management tool could be added to the solid waste management plan, however. In regard to the third task, Ms. Turner said that the task force identified and formed relationships with industry organizations that are willing to serve New Mexico voluntarily; of these, the Product

Stewardship Institute does request a membership fee after one year. Regarding the fourth task, Ms. Turner stated that three product categories were initially identified as potential candidates for product stewardship programs: mattresses, paint and electronics. She said that the task force's recommendation is to begin with a pilot program for mattresses during 2014 that would be facilitated by a product stewardship advisory group. Ms. Turner then reviewed issues related to mattresses that caused the task force to select this category over the others, which include illegal dumping, hazardous conditions at landfills and the fact that other states have figured out ways to create jobs in the recycling of mattresses. She also stated that California, Connecticut and Rhode Island currently have EPR laws for mattresses, all passed in 2013. Ms. Turner concluded by saying that the task force believes that product stewardship could be successful in New Mexico.

Questions and comments ensued and the following points were made:

- in general, most appliances and vehicles have recycling options and do not end up in landfills, and the task force did not find product stewardship or EPR bills addressing such products;
- related to illegal dumping in rural areas of the state, there is a competitive grant process and recurring funding source that allow for the cleanup of land grant disposal sites, for example, and there are increasing opportunities for recycling in rural areas;
- illegal dumping is an issue in more than just rural areas, notably the Pajarito Mesa in Albuquerque, where funding sources are being sought to clean up and recycle the three million tires that are there;
- specifics of the pilot program need to be worked out related to health and safety issues of a mattress recycling program as well as data collection;
- the task force did not discuss the handling of furniture or of freon in appliances as there are no existing product stewardship programs that address either; New Mexico has a successful scrap metal recycling program in which the freon has to be removed by a licensed person, and this is one of the largest recycling revenue sources;
- what is established in other states' legislation for product stewardship is a fee structure for EPR manufacturers that is paid to the program that manages the product at the end of its life cycle; and
- the RHMC would like an update on this pilot program during the next interim to review and determine any future need for legislation.

Innovations in Water Treatment

Jaime Geronimo Vela, doctoral student, New Mexico State University (NMSU), and Dr. Antonio Lara, professor of chemistry, NMSU, began by introducing the research team of students from the NMSU chemistry department who are engaged in devising new methods of water treatment. Mr. Vela passed out pellets for committee members to see, while giving statistics on the uranium contamination of ground water, especially on the Navajo Nation. He said that 30% of households on the Navajo Nation are not connected to a public water supply and that over 14,000 households and 54,000 people are without potable water. Because many water sources remain untested, it is not clear how much ground water contamination there is, and Mr. Vela indicated that with the proper instrumentation, NMSU's team could analyze water on the Navajo

Nation. He added that his group already analyzed 200 wells and found uranium contamination in 34 of those wells. He said that the system NMSU has devised is proven in concept and method, involves "just dirt and student time", does not cost very much and is sustainable over the long haul. The technology that this team has developed cleans up uranium-contaminated water, and the research team could test both soil and water in Navajo Nation wells for contamination. The group needs assistance in order to take the next steps, he told the RHMC.

Dr. Lara reiterated Mr. Vela's appeal for help to bring their hard-earned technology to fruition. He spoke in more detail about the pellet system itself, saying that pellets get rid of pathogens, bacteria, uranium and other heavy metals. This system is being used in Haiti, Central America and South America, he added. Dr. Lara testified to the simplicity of this system, one that is based on opposing charges: organic compounds are negatively charged; pollutants are positively charged; and uranium absorbs into the clay because of the difference in charge. He said that because of the system's simplicity, it can be run by households and communities. He mentioned that other water treatment systems, such as reverse osmosis and distillation, actually "squeeze water" and, after processing, contaminated water is left. These systems are also expensive and require high maintenance, he added.

Dr. Lara spoke in more detail about the choice to use clay pellets, saying that the pellets need to be robust and able to be transported and stored safely without leaching. Some clays have more capacity than others because of the charge they hold. The pH level must also be just right, he added. He said that with the work of the research group, a strong pellet has been developed as well as a means to ensure that uranium is not released from the pellets. Pointing to the sample containers the group had brought into the committee room, Dr. Lara said that even sewer water can be made into clean drinking water in a short period of time with this method and that this could be instituted in disaster areas such as the Philippines. He indicated that the research group needs to build a prototype that can then be tested and to initiate quality assurance. He stated that no one is monitoring the wells on the Navajo Nation and that the water contains cadmium, mercury and other heavy metals in addition to uranium, that people are dying from drinking this water and that his research team already knows how to eliminate heavy metals from water. He ended with a request for assistance that would help the research group sample water correctly and obtain the needed instrumentation for quality assurance.

Questions and comments ensued and the following points were made:

- there is movement inside the buckets as water is being purified due to the ion exchange occurring in the process; drinking water is created fairly quickly because of this movement; and
- approximately \$250,000 could be appropriated through the capital outlay process of either the state or the Navajo Nation to provide NMSU with the needed instrumentation equipment.

On a motion by Senator Martinez and seconded by Senator Padilla, the RHMC unanimously requested that staff write a letter to NMSU recommending that it fund Dr. Lara's research team and make a capital outlay request to the legislature for \$250,000 for equipment.

WIPP Status Update

Joe Franco, Carlsbad Field Office manager, U.S. Department of Energy (DOE), and Farok Sharif, president and project manager, Nuclear Waste Partnership LLC, presented an update on the Waste Isolation Pilot Plant (WIPP). Mr. Franco reviewed WIPP basics, such as why salt is the appropriate repository for transuranic (TRU) waste, the characterization of waste, WIPP's transportation system of carriers and TRU waste shipment containers, the number of containers disposed of at WIPP, responder training provided by the DOE along the WIPP route and companies that make up the WIPP team. He stated that WIPP has had to prove its safety and has gone through performance assessments to satisfy federal Environmental Protection Agency (EPA) criteria, showing that there would be no radioactive particles coming out of the mine for 10,000 years. This assessment is updated and certified by the EPA every five years, he added.

By 2013, the total number of shipments received at WIPP numbered 11,708; there have been 628 shipments in 2013 thus far. Mr. Franco indicated that although the shipping volume has decreased, the curie content has actually risen. In reviewing the volume of waste disposed, Mr. Franco said that 89,463 cubic meters is currently disposed of at WIPP, most of which is contact-handled waste. He added that 22 legacy TRU waste sites have been cleaned up thus far and that some of these facilities are still operating, so WIPP continues to provide the service of cleaning up newly generated waste as well.

Among the key developments Mr. Franco cited were the WIPP route change that cut out 190 miles of the route, creating both travel time and fuel savings. He also mentioned that the temporary Carlsbad route closure and change due to road resurfacing is now back in service, alleviating congestion. In other developments, salt disposal investigations were set up on the north end of the mine to come to conclusions about the use of salt formations for disposal of heat-generating nuclear waste. Depending on financing, field heater tests and post-test forensics will be accomplished in fiscal year 2015. Mr. Franco announced that WIPP received its seven hundredth shipment of remote-handled waste on September 12 of this year.

In terms of the framework agreement between the DOE and the state, which is to remove 3,706 cubic meters of surface TRU waste from Los Alamos National Laboratory (LANL) by June 2014, Mr. Franco indicated that all is on target for this agreement to be reached.

Mr. Sharif noted that all of these accomplishments have been achieved safely, with the operation logging in nearly five million safe-hours.

Questions and comments ensued and the following points were made:

- although WIPP began with Westinghouse as its managing contractor, Westinghouse has since gone through many permutations, including being partially owned by a foreign entity, which caused the loss of defense contracts at that time;
- WIPP cannot receive spent fuel rods as part of its waste stream without legislative changes to the federal WIPP Land Withdrawal Act, although the WIPP facilities were designed and built for high-level waste;
- the WIPP footprint is one square mile of the 16 square miles of available land at WIPP, and it is the DOE's assessment that there is no technical reason why WIPP cannot accept or expand to accept other waste;
- as a deep geological repository, WIPP buries waste 2,150 feet from the surface, whereas in shallow land burials, waste is buried at 70 feet; the depth of burial at WIPP is designed to store waste for a longer time period without water intrusion;
- the waste characterization process is thorough and involves a team of scientific-technical advisors and a review and reporting process, then approval by the state and the EPA;
- water in the area of WIPP is tested on a monthly basis, and WIPP's ground water plan is in accordance with NMED requirements;
- some forensic work could be done at the WIPP site to test an area for the effects on the salt after 20 to 30 years, as per the blue ribbon commission's recommendation;
- regarding the statutory end date for WIPP, the environmental impact statement done in the 1980s said that the pilot project was capable of running through 2030 with a shutdown through 2035, with the caveat that the secretary of energy had the discretion to make a decision on the project; it is the DOE's hope that WIPP operations could happen through 2055 or even longer;
- when WIPP was receiving federal stimulus funds, it could handle 35 shipments per week; at present funding levels, WIPP can handle 17 to 19 per week;
- once the 3706 campaign is completed at LANL, the DOE wants to continue removing below-ground TRU waste;
- from a national standpoint, New Mexico has some leverage to tell DOE to clean up the state first, then WIPP could be available for other cleanup ventures; and
- LANL has been the DOE's first priority for waste removal over the past three years; waste at LANL is characterized and certified on site, then shipped on to WIPP.

Adjournment

There being no further business, the committee adjourned at 2:48 p.m.